

<i>Population:</i>	8,000
<i>1990/91 General Fund</i>	
<i>Revenues:</i>	\$3 million
<i>Fund Balance:</i>	\$1 million
<i># URM's:</i>	51
<i>Type of URM's:</i>	90% commercial* 10% residential
<i>Ordinance Type:</i>	mandatory retrofitting
<i>Retrofit Incentives:</i>	(1) waive permit fees (2) rebate architect and engineering costs
<i>Funding Source:</i>	redevelopment agency
*commercial includes public facilities	

BACKGROUND

The City of Sonoma is a small city located 46 miles northeast of San Francisco. It is perhaps best known for the wineries located in and around it in the Sonoma Valley, which together with Napa Valley form a large part of Northern California's wine country. Tourism is an important part of Sonoma Valley's economic and employment base, as is the agriculture industry which includes orchards, dairy farms and turkey breeding as well as the wine industry. The City of Sonoma is very picturesque, and is centered around a historic plaza featuring buildings which date back to the mid 1800s.

HAZARDOUS BUILDINGS PROFILE

In 1990 the City of Sonoma identified 51 buildings which were considered potentially hazardous (excluding four State-owned buildings). Twenty-nine of the 51 buildings are historic, and most are located on or near the plaza downtown. The buildings range in size from 550 to 15,000 square feet. Approximately 85% of the total square footage is devoted

to commercial use. The city estimates that the cost of repairing all 51 buildings may total between \$7.8 and \$14.5 million dollars including both structural work and tenant improvements.

ORDINANCE

The City of Sonoma's retrofitting ordinance, entitled the *City of Sonoma Seismic Upgrading Program*, was passed in October of 1990. The primary goal of the program is to mitigate the hazards associated with unsafe masonry and concrete buildings "in an economically feasible manner while preserving the historic character of the community." The ordinance is noteworthy not for the retrofit standards which it sets but for its unique and flexible system for prioritizing buildings. The ordinance requires the building department to identify buildings which do not comply with its requirements, and to notify owners of their buildings' deficiencies. Upon receipt of the notice, a property owner must hire an engineer or architect to prepare an upgrading design. Ultimately, buildings which do not comply with the requirements spelled out in the ordinance must be either retrofitted or demolished. The timing of implementation is dependent upon a building's assigned priority:

	DESIGN (from notice)	PERMIT (from notice)	UPGRADING COMPLETED (from permit)
High Priority	2 years	2 1/2 years	2 years
Moderate Priority	3 years	5 years	2 years
Low Priority	4 years	10 years	2 years

The priority system established by the ordinance assigns points for type of use (up to 5 points), number of stories (up to 3 points), proximity to public sidewalk (either 0 or 1 point), and proximity to adjacent buildings (also either 0 or 1 point). A higher number of points represents higher risk. Buildings can be credited with up to 3 points for structural adjustments, such as roof diaphragm or parapet bracing, which have already been made to the building. A worksheet for calculating a building's score is included in the ordinance (See: EXHIBITS - CITY OF SONOMA ORDINANCE #90-15).

The method of assigning points for type of use is noteworthy. The city has identified 10 types of uses to which a building might be put. Each type of use is assigned an "hours per week" figure representing the number of hours per week that use typically could be expected to take place. Office use, for example, is assigned 40 "hours per week" while residential use

is set at 84 "hours per week." For uses not originally identified by the city, the building official may assign an "hours per week" figure to a building based on its type and average hours of use.

After establishing the "hours per week" figure for each type of use, the city then determined the occupant load for each use as specified in the Uniform Building Code. Dividing the "hours per week" by the occupant load yields for each type of use an "occupant/hour factor." Restaurants, for example, are assigned 48 "hours per week" and an occupant load factor of 15, yielding an "occupant/hour factor" of 3.20. For residential facilities, assigned the above-mentioned 84 "hours per week" and an occupant load factor of 200, the resulting "occupant/hour factor" is 0.42. The city has developed a table, included in the ordinance, assigning occupant/hour factors to each of the 10 types of uses which it identified.

To determine the number of points a particular building should receive given its use, the "occupant/hour factor" for that use is multiplied by the building's square footage. This generates an "occupant/hour" figure. The "occupant/hour" figures are divided into ranges and assigned points. The owner of a 1,000 square foot restaurant, for example, would multiply its 3.2 factor by the number of square feet, arriving at an "occupant/hour" figure of 3,200. This figure falls in the 2,001 to 5,000 range, and the building would score 2 points. By contrast, a 1,000 square foot residence would generate an "occupant/hour" figure of 420 given its factor of 0.42 and would score 0 points.

A Low, Medium or High Priority is assigned to a building based upon its total score for occupant/hours, number of stories, proximity to sidewalks and buildings, and structural adjustments. Buildings receiving less than 4 points are assigned a Low Priority, those scoring between 4 and 6 points are considered Moderate Priority, and those with more than 6 points are High Priority. Buildings can change their score and move up or down on the priority scale, for example by making structural adjustments or changing their use.

INCENTIVE PROGRAM CONCEPT

The City of Sonoma offers 2 incentive programs to owners of hazardous buildings, the *Permit Fee Waiver Program* and *A&E Grants for Seismic Upgrading*. Both programs were established shortly after the ordinance was adopted, and were made effective January 1, 1991 and set to terminate on December 31, 1993. The *Permit Fee Waiver Program* applies to all seismic upgrade projects required by the ordinance and covers the following construction permit fees: (i) building, mechanical, electrical and plumbing permits, (ii) contractors license tax, (iii) micrographics fee, (iv) capital improvement tax, (v) impact fee, and (vi) within limitations, plan check fees. All other construction permit fees are assessed as normally

required. (Note that in the case of 100% affordable housing projects, the Community Development Agency will pay for all construction permit fees.)

Public Works Department fees also are waived under the *Permit Fee Waiver Program*, with encroachment fees waived for projects requiring seismic upgrade under the ordinance, and inspection fees waived for work required by the ordinance relating to installation and testing of underground fire and sprinkler system piping. Neither construction permit nor Public Works Department fees are waived for those portions of projects which create additional building floor area.

The *A&E Grants for Seismic Upgrading* reimburses owners for architectural and/or engineering expenses relating to plans for upgrading work required by the ordinance. The city will grant each owner a reimbursement per building of up to \$2.00 per square foot of eligible building area. Only fees paid to a licensed architect and/or engineer or an approved testing agency are eligible for reimbursement. To receive the grant an owner must submit an application (See: EXHIBITS - SAMPLE A&E REIMBURSEMENT GRANT APPLICATION) along with original invoices. Grants are distributed when the building department has approved the seismic upgrading plans. Cost of plans for separate tenant improvements, site work, interior and exterior finishes, additions, furnishings and similar items are not eligible for reimbursement.

PROGRAM RESOURCE REQUIREMENTS

Sonoma's redevelopment agency is funding the city's incentive programs. The estimated maximum cost to the city of the *Permit Fee Waiver Program* is \$75,000 while the *A&E Grants for Seismic Upgrading* are expected to cost up to \$460,000. The incremental staff time required for administration of the programs is minimal.

PROGRAM DEVELOPMENT

Sonoma's program development effort was straightforward and went very smoothly. The ordinance and incentive programs were developed by a technical committee composed of the Building Director, the Community Development Director, an architect, structural engineer, and the City Manager. Upon their design of the ordinance and incentive program concepts, community meetings were held to present these ideas to tenants and owners. The community expressed a number of fears, including concern about requirements for upgraded plumbing, wiring, and the like, worries about changing the character of the city, uneasiness about loss of local ownership because of the expense of upgrading, apprehension about demolition, and

general anxiety about the reasonableness of the requirements. Most of these fears were allayed at the meetings, and the ordinance passed without incident, although concern about the expense and financing of repairs is still an issue which the city hopes to address.

PROGRAM EFFECTIVENESS

Although the earliest deadline for retrofit is not until 1994, as of January 1992, 2 buildings had already been upgraded to comply with the city's ordinance. A third building was upgraded in accordance with the State Historical Building Code, and a fourth was strengthened in accordance with 1976 UBC or above. In addition, 9 buildings were in the process of upgrading. Six buildings have applied for and received reimbursements under the *A&E Grants for Seismic Upgrade* program.

Despite the progress being made, Sonoma is still concerned about making financing available to owners unable to access it themselves. The city is evaluating bond-based programs, such as assessment district or general obligation financing, but has determined that it cannot meaningfully explore its options until it has a better idea of total project costs. To this end it has doubled to \$2.00 per square foot the amount of grant funding for which owners may apply while emphasizing that the program will expire in December 1993. (Owners who have already received rebates will be granted the additional amount for which they would be eligible under the new program.) The objective is to have all the plans in hand by December 1993, and thus get a good estimate of the total retrofitting costs which the city might be asked to help finance.

PROGRAM STRENGTHS

The City of Sonoma's program is clearly articulated, simple to implement, and requires little additional staff time (although it does require money.) Through its system of prioritizing buildings, the city offers owners flexibility, allowing them to retrofit incrementally over time as best meets their needs.

KEYS TO SUCCESS

The success of the City of Sonoma's program rests on the city's ability to effect a straightforward program, clearly articulated and fully discussed with affected owners. The materials designed to describe the program are concise yet thorough (See: EXHIBITS - A&E GRANTS FOR SEISMIC UPGRADING AND PERMIT FEE WAIVER PROGRAM, a 1-page description, and ABOUT CITY OF SONOMA'S SEISMIC UPGRADING PROGRAM.) The programs were designed and are

administered by a small group of people who are very sensitive to the varying perspectives of affected parties. With the support of the city council, staff has made seismic safety a priority, and it is evident that the programs it designed are not ends in themselves, but steps in the mitigation process.

EXHIBITS

- City of Sonoma Ordinance #90-15
- *A&E Grants for Seismic Upgrading and Permit Fee Waiver Program*
- Sample A&E Reimbursement Grant Application
- About City of Sonoma's Seismic Upgrading Program

CONTACTS

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CITY OF SONOMA

EXHIBITS

CITY OF SONOMA
ORDINANCE NO. 90-15

ORDINANCE OF THE CITY OF SONOMA
ADDING CHAPTER 14.24 TO THE SONOMA MUNICIPAL CODE
SETTING FORTH A PROGRAM FOR THE REVIEW, REHABILITATION AND
ABATEMENT OF EXISTING SEISMICALLY UNSAFE BUILDINGS.

Chapter 14.24 is hereby added to the Sonoma Municipal Code to read as follows:

CHAPTER 14.24
REVIEW, REHABILITATION AND ABATEMENT
OF EXISTING SEISMICALLY UNSAFE BUILDINGS

Sections:

- 14.24.010 Purpose, Scope & Application.
- 14.24.020 Definitions.
- 14.24.030 Preliminary building department review.
- 14.24.040 Notice to owner.
- 14.24.050 Property owner review.
- 14.24.060 Upgrading design - Requirements for continued use of structure.
- 14.24.070 Information required on plans.
- 14.24.080 Priority system and implementation schedule.
- 14.24.090 Notification of tenants.
- 14.24.100 Abatement - Rehabilitation or Demolition.
- 14.24.110 Appeals.
- 14.24.120 Violation - Penalty.
- 14.24.130 Severability.

14.24.010 Purpose, Scope & Application. A. Purpose. The City of Sonoma has experienced and will continue to experience moderate to great earthquakes in the future due to its proximity to the Rodgers Creek, Hayward and San Andreas faults. Many buildings subject to severe earthquake hazards continue to be a serious threat to the life and safety of people who live and work in the community in the event of an earthquake. The primary goal of this chapter is to provide alternative construction regulations designed to reduce the risk of death or injury resulting from earthquake hazards in existing masonry or concrete buildings, in an economically feasible manner while preserving the historic character of the community.

B. Scope. This chapter provides procedures for the systematic review and reconstruction of existing masonry and concrete buildings within the City of Sonoma to improve their safety in the event of an earthquake. The requirements of this chapter shall not apply to:

1. Public schools
2. Hospitals
3. State owned buildings
4. Detached one-and two-family dwellings.

The requirements of this chapter shall apply to the following classifications and areas of buildings:

1. All buildings or portions of buildings constructed with unreinforced masonry walls.
2. Diaphragms and connections of diaphragms in all buildings constructed of tilt-up concrete or masonry walls and constructed or being constructed prior to September 24, 1973.

This chapter does not require alteration of existing electrical, plumbing or mechanical systems unless such conditions or defects exist to the extent that the life, health, property or safety of the public or its occupants are endangered.

C. Application to Other Existing Buildings. Existing buildings, which are not subject to the requirements of this chapter and were constructed or being constructed prior to September 24, 1973, may be rehabilitated, remodeled or upgraded in accordance with the upgrading design provisions of Section 14.24.060, except that public schools, hospitals, fire stations, police stations, essential facilities and hazardous facilities, must comply with prevailing code requirements.

D. Application to Designated Historical Buildings. Designated historical buildings shall be upgraded in accordance with the State Historical Building Code. The design and upgrading provisions of this chapter may be used in conjunction with the State Historical Building Code as a method of complying with the minimum requirements of this chapter.

14.24.020 Definitions. For the purposes of this chapter, certain terms, phrases, words and their derivatives shall be construed as specified in this section or as otherwise specified in the Uniform Building Code, the Uniform Code for the Abatement of Dangerous Buildings, the State Historical Building Code or Chapter 19.04 of the Sonoma Municipal Code. Where terms are not defined, they shall have their ordinary accepted meanings within the context with which they are used.

A. "Architect" means a person who is licensed to practice architecture in this state.

B. "Designated Historical Building" means any building, structure or collection of structures, deemed of importance to the history, architecture, or culture of an area by an appropriate local, state, or federal governmental jurisdiction. This shall include structures on existing or future national, state or local historical registers or official inventories of historical or architecturally significant sites, places, historic districts, or landmarks.

C. "Engineer" as used in this chapter means any professional, civil or structural engineer who is licensed to practice engineering in this state.

D. "Occupant/Hours" is the result of the maximum occupant load for a particular type of use, multiplied by the prescribed typical number of hours the type of use might be occupied or open for business within a 7 day period.

E. "Prevailing Code" means the "regular building regulations" as that term is used in Section 18954 of the Health and Safety Code, which govern the design and construction of non-historical buildings within the city of Sonoma.

F. "Upgrading" means all work necessary to comply with the requirements of this chapter.

G. "Unreinforced Masonry Building" means any building or structure containing walls constructed wholly or partly with unreinforced masonry walls.

H. "Unreinforced Masonry Wall" is a masonry wall having an area of reinforcing steel less than 50 percent of that required by Section 2407(h) of the Uniform Building Code, 1988 Edition, with a height to thickness ratio greater than 2.

I. "Valuation" as used in this chapter shall mean the total value of all construction work, determined in accordance with prevailing code, except structural and fire upgrading work required by this chapter, for which a building permit is issued as well as finish work, roofing, mechanical systems, elevators, disabled access, and any other permanent equipment.

14.24.030 Preliminary building department review. Buildings within the scope of this chapter constructed or being constructed prior to September 24, 1973 shall be subject to a preliminary review by the building official to determine the general structural characteristics, the relative safety of the building, and its general compliance with the structural requirements of Section 14.24.060 A through E of this chapter and Appendix Chapter 1 of the Uniform Building Code. If the structure is determined to so comply, it is exempt from the requirements of this chapter. If the building official determines that the structure does not comply, it shall be further reviewed by the property owner in accordance with the provisions of Section 14.24.050.

A. The scope of the preliminary review by the building official or his authorized representative may include, but shall not be limited to, the following:

1. Location by street address and assessor's parcel number;
2. Type of occupancy and approximate square footage;
3. Type of construction and foundations, and type of material used in construction;
4. Age of construction; photos of the building exterior; construction drawings if available;
5. Quality of maintenance, cracks and cleanliness; evidence of leaks, foundation settlement, sagging floors or rusting metal and rotting wood; general deterioration of any other building material used;
6. General fire classification of the structure;
7. Adequacy of exiting system;
8. Type and strength of wall and parapet anchorage;
9. Type of diaphragms and bracing;
10. Type of interior partitions.

B. For the purposes of determining compliance with this chapter, the building official may rely on the information provided in items 1 through 10 above and shall not be required to provide extensive tests in connection with the preliminary review.

14.24.040 Notice to owner. A. Notice to Correct Deficiencies. For each building found to be not in compliance with the requirements of Section 14.24.060, the building official shall prepare a notice to owner to correct deficiencies. The notice to correct deficiencies shall include the following:

1. A statement to the effect that the structure has been reviewed and appears to be of the type which is prone to significant damage, including collapse, in a moderate to major earthquake;
 2. The determination of non-compliance with the requirements of Section 14.24.060;
 3. Where applicable, the findings on which the determination that the building or structure does not comply is based;
 4. The determination of the priority for upgrading in accordance with the URM Building Priority System in Section 14.24.080;
 5. The time schedule for abatement must be commenced and completed;
 6. A statement that the structure shall be further reviewed by the property owner as provided in Section 14.24.050;
 7. A statement that the owner is required to provide a copy of the notice to correct deficiencies to the tenant or tenants of the structure in accordance with Section 14.24.090.
- B. Recordation. At the time that the aforementioned notice is served, the building official shall file with the office of the County Recorder a certificate stating that the subject building is within the scope of Chapter 14.24 of the Sonoma Municipal Code, Review, Rehabilitation and Abatement of Existing Seismically Unsafe Buildings. The certificate shall also state that the owner thereof has been ordered to review and structurally analyze the building and upgrade the building in accordance with this chapter.

14.24.050 Property owner review. Upon notice by the City to the property owner to correct deficiencies, the property owner shall require an engineer or architect to review and prepare an upgrading design for the subject building or structure within the time limits set forth in Section 14.24.080. Required upgrading may be designed in accordance with the provisions of Section 14.24.060.

14.24.060 Upgrading design - Requirements for continued use of structure.

Upgrading work and design shall be performed by the property owner, his representative, agent, or employee under the direct supervision of an architect, structural engineer or civil engineer specializing in structural work, to include but not be limited to the following standards:

- A. The vertical dead load (without live or lateral loads) must not create any overstress as related to allowed stresses pursuant to this chapter, except that foundations may be assumed to have met the test of time where there is no settlement or damage;
- B. The building must meet the requirements of prevailing code for vertical forces including live load with no more than fifteen percent overstress;
- C. Walls, parapets, windows and doors must be adequate for a fifteen-pound wind, twenty percent gravity on walls, fifty percent gravity on parapets both in spanning between resisting elements and attachments supporting elements with no more than fifty percent increase to stresses in lieu of the presently allowed thirty-three and one-third percent increase;
- D. Diaphragms must be capable of resisting prevailing code required lateral forces at not over one hundred percent increase in normal code values (base plus one hundred percent in place of base plus thirty-three and one-third percent). Where wood diaphragms are used to support concrete or masonry walls, the anchorage shall not be accomplished by toe nailing or the use of nails subject to withdrawal, nor shall wood ledgers or framing be used in cross-grain bending or cross-grain tension. Straight sheathed diaphragms shall not be used to resist lateral forces in concrete or masonry buildings. Chords, connections of diaphragms to the vertical elements and connections of collectors to the vertical elements in structures shall be provided;
- E. Shear walls must be adequately connected and tied down to foundations. Unreinforced masonry may be used in shear parallel to plane of the wall provided that the wall is securely held in place perpendicular to wall;
- F. Compliance with the fire and panic requirements of Chapter 14.20 of the Sonoma Municipal Code, Appendix Chapter 1 of the Uniform Building Code, or when applicable, the State Historical Building Code, concerning exit requirements, enclosed stairways, fire sprinkler systems, fire separations, fire protection and panic hardware. Alternative methods of fire protection, including but not limited to fire sprinkler systems and smoke detection systems, may be approved by the fire marshal and the building official.

G. Existing solid masonry walls of any type, except adobe, may be allowed a maximum value of four (4) pounds per square inch in shear, without testing, with a one-third increase for lateral forces where there is a qualifying statement by the engineer that an inspection has been made, that mortar joints are filled and that both brick and mortar are in good condition. Allowable values above apply to existing unreinforced masonry, except adobe, where the maximum unsupported height or length to thickness ratio does not exceed 12. Allowable shear stress may be increased by the addition of 10% of the axial direct stress due to the weight of a wall directly above. Higher quality mortar may provide a greater shear value based on analysis by the engineer. Wall height or length is measured to supporting resisting elements which are at least twice as stiff as the tributary wall. Stiffness is based on the gross section of the wall.

H. Compliance with state and federal regulations concerning disabled access is required.

I. Existing electrical, plumbing, mechanical and other nonstructural portions of the building which are found to be dangerous to the extent that the life, health, property or safety of the public or its occupants are endangered, shall be upgraded in accordance with prevailing code. The Uniform Code for the Abatement of Dangerous Buildings shall be used in determining whether dangerous conditions exist.

14.24.070 Information required on plans. The review and upgrading design prepared by the engineer or architect shall be submitted to the building official and shall include, but not be limited to, the following:

1. Location by street address and assessor's parcel number;
2. Type of occupancy, use of the building and accurate dimensions;
3. Type of construction, type of foundation, and material used in construction. Field and laboratory tests as determined necessary by the building official, the architect or the engineer, shall include but not be limited to the drilling of inspection holes, the determination of the strength and quality of materials, and a general description of how these materials are integrated within the structure;
4. Comprehensive review of conditions, maintenance and foundation performance;
5. Complete vertical load resume, analysis or estimate based on typical bays and details of all critical areas;

6. Investigation, review and analysis of building elements including, but not limited to, mortar, masonry, walls, parapets, diaphragms, shear walls, bracing, attachments and ornamentation, ceilings, lights, stairs, type and resistance of interior partitions, presence and adequacy of diaphragm chords, and ties;
7. Verification of elements of preliminary building department review;
8. Such plans or sketches, as necessary to describe building strengths and deficiencies;
9. Summary statement of findings;
10. Statement of the engineer or architect explaining the overall significance of the deficiencies found to exist in the building's vertical and lateral force resisting system as related to current code requirements and evaluation criteria;
11. Independent statement of engineer or architect as to his professional opinion regarding the safety of the building in regard to fire, panic, moderate and major earthquake, with reasons for his opinion, without regard to code requirements;
12. A statement by the architect or engineer, in his opinion, as to whether or not special or unusual factors exist that alleviate or intensify the risk;
13. Such other information or testing as required by the building official;
14. Calculations, plans and specifications to show compliance with the requirements of this chapter;
15. Exceptions and/or alternatives to the specific items required by this subsection may be granted by the building official upon review of a written request from the engineer or architect providing the review of the building. Exceptions may only be granted when it can be demonstrated that the specific item or items are unnecessary to provide information available by other equivalent means.

14.24.080 Priority system and implementation schedule. Buildings subject to this chapter shall be classified by priority in accordance with the URM building priority system specified in this section. The building official may revise the priority classification of a building when new factual information is provided which would result in a change of the total priority points previously assigned to the building. Buildings shall be reviewed and upgraded in accordance with the implementation schedule set forth in this section.

A. Method of determining occupant/hour factors. Occupant/Hour factors are determined by dividing the number of assigned hours per week for a particular use by the occupant load factor in U.B.C. Table 33-A. The assigned "hours per week" represents the typical number of hours per week a particular use might be open for business or used and is derived from Table - A herein. Occupant loads are determined by using Table 33-A of the Uniform Building Code; 1988 Edition.

B. Table - A.

USE	HOURS PER WEEK	OCCUPANT LOAD FACTOR	OCCUPANT/HOUR FACTOR
Retail	48	30	1.60
Office	40	100	0.40
Residential	84	200	0.42
Restaurant/Bar	48	15	3.20
School/Day Care	35	35	1.00
Hotel/Motel	84	200	0.42
Public Building	48	15	3.20
Assembly Halls/Churches	8	15	1.10
Accessory/Storage	7	100	0.07
Industrial/Manufacturing	48	200	0.24

Other: For uses not listed above, the Building Official shall assign appropriate "hours per week" values based on the type and average hours of use.

C. Structural adjustments. Negative priority points for structural adjustments may be allowed by the Building Official when partial structural rehabilitation has been performed or exists to the extent that structural deficiencies due to seismic forces are significantly reduced so as to substantially reduce the hazard to life safety created by such deficiencies in the event of an earthquake. **The Building Official shall not reduce the total of priority system points by more than three (3) points for structural adjustments.**

In considering structural adjustments, the Building Official shall consider only force resisting elements and systems (i.e. complete roof diaphragm with tension anchors, shear transfer connections, parapet stability) that, will substantially complete the structural rehabilitation for that element or portion of the building in accordance with the approved upgrading plans and specifications.

D. Priority System Worksheet.

URM BUILDING PRIORITY SYSTEM

Occupant/Hour Factors

Retail = 1.6	Office = .4	Residential = .42	Restaurant/Bar = 3.2
Schl./Day Care = 1	Hotel = .42	Public Building = 3.2	Assembly/Church = 1.1
Accessory = .07	Indstrl/Manuf. = .24	Other: Determined by Building Official	

Determining Occupant/Hours

Use _____	_____	x	_____	=	_____
	Square footage		Occ./hour factor		Occupant/Hours
Use _____	_____	x	_____	=	_____
	Square footage		Occ./hour factor		Occupant/Hours
Use _____	_____	x	_____	=	_____
	Square footage		Occ./hour factor		Occupant/Hours

TOTAL OCCUPANT/HOURS _____

POINTS

Occupant/Hours	Points
0 - 500	0
501 - 2,000	1
2,001 - 5,000	2
5,001 - 8,000	3
8,001 - 11,000	4
11,001 & Above	5

Occupant/Hour Points _____

Number of Stories	Points
1	1
1.5	1.5
2	2
3	3

Number of Stories Points _____

Proximity to Public Sidewalk	Points
Less than 10 feet	1
Equal or greater than 10 feet	0

Proximity to Sidewalk Points _____

Proximity to Adjacent Building	Points
Within 3 feet of adjacent building	1
Greater than 3 feet	0

Adjacent Building Points _____

Structural Adjustment	Points
Roof diaphragm, parapet bracing	-1
Storefront lateral bracing system	-1
Other bracing, ties, connections	-1

(Structural Report/Plans Required) Structural Adjustment Points _____

PRIORITY

Less than 4 points = LOW PRIORITY
 4 to 6 points = MODERATE PRIORITY
 More than 6 points = HIGH PRIORITY

TOTAL POINTS _____

F. Implementation schedule. **High-Priority Buildings.**

1. A review and upgrading design prepared by an engineer or architect must be submitted to the building official for approval within 2 years of notice to owner to correct deficiencies.
2. A building permit for complete upgrading in accordance with the engineer's or architect's review and reinforcement design must be issued within 2 1/2 years of notice to owner to correct deficiencies.
3. Complete upgrading shall be completed within 2 years of issuance of building permit.

G. Implementation schedule. **Moderate-Priority Buildings.**

1. A review and reinforcement design by an engineer or architect must be submitted to the building official for approval within 3 years of notice to owner to correct deficiencies.
2. A building permit for complete upgrading in accordance with the engineer's or architect's review and reinforcement design must be issued within 5 years of notice to owner to correct deficiencies.
3. Complete upgrading shall be completed within 2 years of issuance of building permit.

H. Implementation schedule. **Low-Priority Buildings.**

1. A review and upgrading design by an engineer or architect must be submitted to the building official for approval within 4 years of notice to owner to correct deficiencies.
2. A building permit for complete upgrading in accordance with the engineer's or architect's review and reinforcement design must be issued within 10 years of notice to owner to correct deficiencies.
3. Complete upgrading shall be completed within 2 years of issuance of building permit.

14.24.090 Notification of tenants. Upon receipt of notice to correct deficiencies, the building owner shall notify all tenants, in writing, that a review of the building has been performed and that said building may be structurally hazardous in the event of an earthquake.

14.24.100 Abatement - Rehabilitation or Demolition. Buildings subject to the requirements of this chapter which do not meet the requirements of this chapter shall be abated by rehabilitation, repair or demolition in accordance with the provisions of this chapter.

A. Rehabilitation. Designated historical structures, when rehabilitated, remodeled, repaired or upgraded shall comply with the provisions of the State Historical Building Code.

B. Demolitions. Buildings subject to the requirements of this chapter which do not meet the requirements of this chapter may be abated by demolition. Owners of buildings located within the Historic Conservation Combining District must receive approval from the Architectural Review Commission prior to obtaining a demolition permit to demolish the structure. Prior to obtaining a demolition permit for the demolition of a designated historical structure, the proposed building demolition shall be reviewed by the City's Environmental Review Committee and shall comply with the guidelines of the California Environmental Quality Act and the requirements of the Sonoma Municipal Code.

C. Substandard buildings, hazards or dangerous conditions which are not abated within the time limits set forth in Section 14.24.080, shall be considered a public nuisance and a dangerous building and shall be vacated and/or abated in accordance with the provisions of the Uniform Code for the Abatement of Dangerous Buildings and Chapter 14.30 of the Sonoma Municipal Code. In addition to any other remedy provided herein, the City Council may cause any building not abated within the time limits set forth in Section 14.24.080, to be vacated, strengthened, repaired, rehabilitated, remodeled, demolished or upgraded in accordance with the provisions of this chapter and place a lien on the property for all costs incurred in accordance with the provisions of the Uniform Code for the Abatement of Dangerous Buildings and/or Chapter 14.30 of the Sonoma Municipal Code.

14.24.110 Appeals Any person having record title, equitable or legal interest in the subject building may appeal any notice, order, decision, determination or action made in the administration of this chapter to the City Council of the City of Sonoma, provided that the appeal is made in writing and filed with the building official within 60 days from the date of service of said notice, order, decision, determination or action by the Building Official, except that an appeal for an extension of the implementation schedule set forth in Section 14.24.080 shall be made not less than 180 days prior to the required implementation date; however, if the building or structure is in such a condition as to make it immediately dangerous to the life, limb, property or safety of the public or adjacent property and is ordered vacated and is properly posted, such appeal shall be filed within 10 days from the date of service of this notice and order. Only one subject of appeal is allowed per building, provided due process is met.

A. The written appeal shall contain the following:

1. A heading in the words: "To the City Council of the City of Sonoma".
2. The names of the appellants named in the appeal.
3. A brief statement setting forth the legal interest of each of the appellants in the land and/or building involved.
4. A brief statement in ordinary and concise language of the specific order or action protested, together with any material facts claimed to support the contentions of the appellants.
5. A brief statement in ordinary and concise language of the relief sought and the reasons why it is claimed the protested order or action should be reversed, modified or otherwise set aside.
6. The submittal of any documents, sworn statements or other written material claimed to have value on the contentions made in support of the appeal.
7. The signatures of all parties named as appellants and their mailing addresses.
8. The verification (by declaration under penalty of perjury) of at least one appellant as to the truth of the matters stated in the appeal.

B. Upon receipt of an appeal filed pursuant to the above requirements, the Building Official shall present it at the next regular meeting of the City Council. **Failure to appeal will constitute a waiver of all rights to an administrative hearing and determination of the matter.**

14.24.120 Violation - Penalty. Any person, firm or corporation who or which violates any provision of this chapter as adopted by the ordinance codified herein, or any lawful order thereunder, is guilty of a misdemeanor as a separate offense for each and every day such person, firm or corporation violates or allows a violation to continue without taking reasonable means to cure or abate the same after having been ordered to do so. Such misdemeanors are punishable as provided by the general law of this state.

14.24.130 Severability. If any section, subsection, sentence, clause, phrase or word of this chapter is for any reason held to be invalid and/or unconstitutional by a court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this chapter. The City Council of the City of Sonoma hereby declares that it would have passed and adopted this chapter and each of the provisions thereof, irrespective of the fact that any one or more of said provisions be declared invalid and/or unconstitutional.

A&E GRANTS FOR SEISMIC UPGRADING

This program becomes effective on January 1, 1991 and terminates on December 31, 1992.

- A. Only plans prepared by a licensed architect and/or engineer or reports prepared by an approved testing agency, for upgrading work required by Sonoma Municipal Code Chapter 14.24 is eligible for the A&E grant. This work includes but is not limited to:
 - i. Review, investigation, analysis, testing, documenting and reporting of structural, fire and life safety, exiting, mechanical systems and disabled access deficiencies.
 - ii. Preparation of reports, plans and engineering documents necessary to perform required upgrading and abatement work.
- B. Up to \$1.00 per square foot of eligible building area will be granted to one building owner per affected building. (Eligible building area is the gross area within and including the exterior walls of the building or portion thereof. The floor area of a building, or portion thereof, not provided with exterior walls shall be the usable area under the horizontal projection of the roof or floor area above.)
- C. The A&E grant is to be used exclusively for reimbursement of architectural and/or engineering fees.
- D. The A&E grant will be distributed upon building department approval of seismic upgrading plans for each building required to be upgraded within the scope of S.M.C. Chapter 14.24.
- E. The upgrading plans must be comprehensive and complete for all portions of the building found to be deficient in accordance with S.M.C. 14.24.
- F. Original invoices from the architect, engineer and/or testing agency for the preparation of upgrading plans, specifications, testing and reports shall be submitted with the grant application.
- G. Costs of plans for separate tenant improvements, site work, interior and exterior finishes, additions, furnishings and similar items are not eligible for the A&E grant program.

PERMIT FEE WAIVER PROGRAM

This program applies to all seismic upgrading projects required by Section 14.24 of the Sonoma Municipal Code and becomes effective on January 1, 1991 and ends on December 31, 1992.

- 1. Certain construction permit fees for seismic upgrading work required pursuant to S.M.C. Chapter 14.24 will be waived. Fees which will be waived include:
 - a. All Building, Mechanical, Electrical and Plumbing permit fees.
 - b. Plan Check fee up to four-tenths of one percent (0.4%) of the valuation of the work as defined by the Uniform Building Code and assigned by the Building Official.
 - c. Contractors License Tax
 - d. Micrographics Fee
 - e. Capital Improvement Tax
 - f. Impact Fee
- 2. All Public Works Department encroachment permit fees will be waived for projects requiring seismic upgrading pursuant to S.M.C. Chapter 14.24.
- 3. All Public Works Department inspection fees related to installation and testing of underground fire sprinkler system piping and required pursuant to S.M.C. Chapter 14.24.
- 4. No fees will be waived for those portions of projects which create additional building floor area.
- 5. All other construction permit fees not mentioned above will be assessed as normally required.

In addition to the program mentioned above for seismic upgrading, the Community Development Agency shall pay all of the construction permit fees listed in #1 above, for all 100% affordable housing projects as defined by Section 19.71 of the Sonoma Municipal Code.

This program commences on January 1, 1991 and terminates on December 31, 1993.

- | | | | | | |
|-------------------|-----------------|------|-------|-----------------------|--|
| Project Address: | | | | Amount of Invoices \$ | |
| Owner's Name: | | | | Phone | |
| Mailing Address: | | | | | |
| | Street/P.O. Box | City | State | Zip | |
| Engineer's Name: | | | | Phone | |
| Architect's Name: | | | | Phone | |

I certify that I have read this application and state that the information which I have provided, including attachments, is true and correct.

Signature of Owner

Date _____

FOR OFFICE USE ONLY

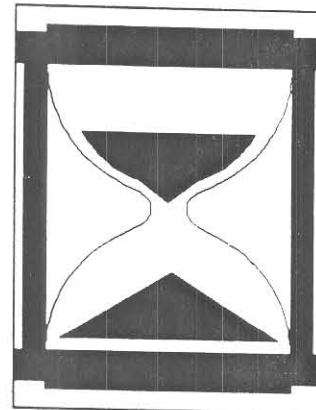
- | | | |
|----|--|----------|
| 1. | Invoice Totals | \$ _____ |
| 2. | Adjustments to Invoices | \$ _____ |
| 3. | Total Allowed Invoice Amount | \$ _____ |
| 4. | Eligible Square Footage | \$ _____ |
| 5. | Eligible Reimbursement Amount (@ \$2.00/s.f) | \$ _____ |
| 6. | REIMBURSEMENT AMOUNT
(Enter the lesser amount shown on line 3 or line 5) | \$ _____ |

Building Official Approval

City Manager Approval

April 14, 1992

ABOUT CITY OF SONOMA'S SEISMIC UPGRADING ORDINANCE



Q. What is the purpose of the seismic upgrading ordinance?

A. The primary goal of the seismic upgrading ordinance is to provide a systematic method of reducing the risk to human life posed by seismically unsafe buildings in the event of an earthquake. This will be accomplished by providing economically acceptable construction regulations designed to reduce the probability of catastrophic wall and ceiling collapse in certain buildings which are potentially unsafe, thereby reducing the number of deaths and injury in the event of an earthquake.

A study released by the United States Geological Survey in June of 1990, indicates there are 2 chances in three that an earthquake the size of the Loma Prieta quake will occur within the next 30 years. If that quake occurs on the Rodgers Creek Fault, we can expect the shaking to be 48 times greater than the shaking we felt here in Sonoma during the Loma Prieta event. As recently as April of 1992, scientists have increased the probability of a moderate to large earthquake occurring on the Rodgers Creek Fault.

Q. What buildings are affected by the City of Sonoma's new seismic upgrading program (Sonoma Municipal Code Chapter 14.24)?

A. All buildings constructed with unreinforced masonry walls and diaphragms and connections of diaphragms in buildings constructed prior to September 24, 1973, of tilt-up concrete or masonry are affected, except public schools, hospitals, state owned buildings and one-and two-family dwellings.

Q. I have an older wood framed building which I would like to structurally upgrade, may I upgrade the building using the provisions of the new seismic upgrading program (S.M.C. Chapter 14.24)?

A. Any existing building, including wood framed structures, except public schools, hospitals, fire stations and other essential facilities, constructed prior to June 1, 1973, may be upgraded or rehabilitated using the upgrading design provisions of the ordinance.

Q. My building was not on the "Potentially Hazardous - URM Building List" prepared by the City of Sonoma in December of 1989; why is my building affected by the requirements of S.M.C. Chapter 14.24?

A. The "Potentially Hazardous" - URM Building List, was prepared by the City of Sonoma and submitted to the Seismic Safety Commission to comply with the identification and notification requirements of Senate Bill 547 which was signed into law in 1986. The provisions of SB 547 required cities and counties located within Seismic Zone 4, to identify those buildings constructed of unreinforced masonry construction. There are masonry buildings within Sonoma which were constructed prior to September 24, 1973, which have partially reinforced walls and buildings constructed with reinforced masonry or concrete walls which have inadequate wall connections and roof systems. These buildings are subject to the requirements of S.M.C. Chapter 14.24 and therefore there may be buildings on the new list of potentially hazardous buildings which have not previously been identified.

April 14, 1992

Q. Who determines if my building is affected by the ordinance?

A. The Building Division of the City of Sonoma Community Development Department will conduct a preliminary review of all buildings within the scope of the ordinance to determine if the building meets the upgrading design standards of the ordinance. If the building is determined to comply with the upgrading design standards, the building will be taken off of the "potentially hazardous" building list. If the building does not comply, you will be issued a notice to correct deficiencies and provided with a copy of the preliminary review report.

Q. What if I disagree with the findings of the preliminary report by the building department?

A. The preliminary review findings of the building department may be adjusted or corrected by submitting evidence that the building department findings are incorrect by providing an engineering analysis of the building which shows that the building complies with the upgrading design requirements of the ordinance. Additionally, the ordinance provides that any decision made by the Building Official may be appealed to the City Council by the building owner.

Q. How much will seismic upgrading work for my building cost?

A. The cost of performing seismic upgrading work can vary greatly between different buildings and therefore cannot easily be assigned to your building without a detailed analysis of the work which must be performed. The best way to determine the cost for seismic upgrading for your building is to obtain an estimate from an engineer, architect or contractor, after upgrading plans have been prepared by your architect or engineer.

For the purposes of obtaining a general idea of overall URM upgrading costs, the URM Mitigation Technical Committee estimates that the average upgrading costs for basic seismic rehabilitation including tenant improvement work could be between \$34 and \$63 per square foot of building area.

Q. Can my tenants occupy my building while seismic upgrading work is being performed?

A. In some cases, tenants may be able to occupy some or all of the building while upgrading work is being performed provided that the building is maintained in a safe condition for the tenants and the public. Many owners and tenants prefer however, to perform the upgrading as expediently as possible, which usually requires temporarily relocating the tenant.

Q. How will the priority of my building be determined?

A. Included in the seismic upgrading ordinance is a unique URM Priority System. The system assigns priority points to a building based on six key elements including: the typical number of hours a type of use is occupied, the occupant load for the building, the number of stories of the building, the proximity of the building to the public sidewalk, the proximity of the building to an adjacent building, and whether or not certain key structural elements exist in the building. The Building Department assigns the priority points and makes the determination as to priority classification in accordance with the URM Priority System. The Priority System provides an effective, fair and practical means to measure and assign some level of risk to an existing potentially unsafe building.

April 14, 1992

Q. Does the seismic upgrading program encourage or require the demolition of historical buildings?

A. No! The seismic upgrading ordinance used in conjunction with the State Historical Building Code will actually help to preserve existing historical resources by allowing historical buildings to be upgraded without conforming with all of the requirements of the current building code. If a building owner were to propose demolition as a method of abating a seismically unsafe building, the owner would first be required to comply with the City's environmental review process as well as obtain approval by the City's Architectural Review Commission. Additionally, the ordinance affords the City Council the option of having required upgrading work performed on a building rather than demolition and all costs associated with the upgrading assessed on the tax roll for the property. Therefore, even if privately owned, buildings which are of primary historical significance to the City Council and the citizens of Sonoma could be saved from demolition.

Another important element that comes into play is the fact that under most circumstances, it will be more feasible economically to rehabilitate a historical building rather than demolish it. The reason for this is that buildings which are demolished may only be rebuilt if the proposed new building meets all current Uniform Building Code and City of Sonoma Zoning requirements. Three-fourths of the historical buildings which would be affected by the upgrading ordinance presently do not comply with the City's minimum parking requirements and would therefore need to provide additional parking for a proposed new building. For most of the historical buildings in town, it would be economically unfeasible to provide additional off-street parking as part of a new project in that there is a very limited amount of space on most historical properties. Additionally, there will be no tax breaks for persons proposing to demolish a building as opposed to performing structurally upgrading work.

Q. What effect will seismic upgrading have on my property taxes.

A. The State Constitution has been amended to prevent assessors from raising property values for seismic strengthening of unreinforced masonry bearing wall construction, necessary to comply with any local ordinance relating to seismic safety for a period of 15 years.

Q. If I upgrade my building in accordance with the seismic upgrading program, will my building be earthquake proof?

A. No! The ordinance is designed to reduce the risk to life resulting from a catastrophic or partial building collapse. Buildings upgraded in accordance with the ordinance will help to save lives in the event of a damaging earthquake, but probably will sustain some level of damage. Owners wishing to prevent major structural damage to their buildings should consider using the Uniform Building Code as the upgrading design criteria.

Q. How can the assigned priority of my building be lowered to allow me more time to perform rehabilitation work?

A. The assigned priority points for your building may be revised by performing partial seismic upgrading work or by changing the type of use to a category which is less intensive based on occupant/hours or by vacating a portion or all of the building. If the number of priority points can be reduced enough to place the building in a lower priority classification, the number of years for required upgrading will be extended to meet the schedule for the newly designated priority category.

April 14, 1992

Q. What are occupant/hours?

A. "Occupant/Hours" establishes the total accumulated number of hours a building might be occupied assuming the building is filled to maximum capacity for a 7 day period. Since the potential for injury or death resulting from a collapse or partial collapse of a building in the event of an earthquake is directly related to the number of people in and around the building, "occupant/hours" serves as an important factor in assigning the priority to a particular building.

Q. When will upgrading work be required for my seismically unsafe building under the seismic upgrading ordinance?

A. The seismic upgrading ordinance requires upgrading to be completed under an implementation schedule based on an assigned priority. Additionally, buildings which have been vacated for more than six months and buildings which are proposing significant remodeling or additions are required to perform seismic upgrading prior to reoccupying the building or as a part of remodeling or addition project. The timetable for required upgrading based on the priority implementation schedule is as follows:

I. High-Priority Buildings:

- a. Review and upgrading design submitted to Building Department within 2 years of notice to owner to correct deficiencies.
- b. Obtain a building permit to perform upgrading work within 2-1/2 years of notice to owner to correct deficiencies.
- c. Complete upgrading work within 2 years of issuance of building permit.

II. Moderate-Priority Buildings:

- a. Review and upgrading design submitted to Building Department within 3 years of notice to owner to correct deficiencies.
- b. Obtain a building permit to perform upgrading work within 5 years of notice to owner to correct deficiencies.
- c. Complete upgrading work within 2 years of issuance of building permit.

III. Low-Priority Buildings:

- a. Review and upgrading design submitted to Building Department within 4 years of notice to owner to correct deficiencies.
- b. Obtain a building permit to perform upgrading work within 10 years of notice to owner to correct deficiencies.
- c. Complete upgrading work within 2 years of issuance of building permit.

Q. If I perform structural upgrading on my building will a fire sprinkler system be required to be installed?

A. Possibly! In accordance with the Uniform Fire Code as amended and adopted by the city, fire sprinkler systems are required in all buildings subject to the requirements of the seismic upgrading program if the gross area of the building is greater than 4,000 square feet and the valuation of the upgrading work exceeds \$50,000, exclusive of the cost of the fire sprinkler system.

April 14, 1992

Q. If I perform structural upgrading on my building, will access to the physically disabled be required?

A. Yes! State building regulations require that when structural alterations, repairs or an addition is made to an existing building, access to the physically disabled must be provided in the following locations:

1. The area of addition, alteration or repair.
2. The path of travel from the public sidewalk or parking area to the addition, alteration or remodeled area must be made accessible.
3. Bathrooms, telephones and drinking fountains serving the remodeled area must comply with disabled access requirements.

Q. By providing disabled access, does that mean I will be required to install an elevator in my existing two story building?

A. Probably not. None of the buildings in Sonoma which would be affected by the seismic upgrading ordinance would be required to install an elevator unless the use of the upstairs portion of the building was changed to a restaurant, public building or other similar type of use. Uses in existing buildings such as retail businesses, offices, lodge rooms, apartments, hotels and motels do not require an elevator.

Q. Is there any funding available to me for performing seismic upgrading work?

A. YES The City of Sonoma offers the following funding programs:

- * Reimbursements of up to \$2.00 per square foot of eligible building area is provided to property owners for the exclusive purpose of helping owners pay for the costs of preparing engineering analysis, reports and construction plans for upgrading work. This reimbursement program is due to expire on December 31, 1993.
- * Certain building permit and plan checking fees for seismic upgrading work are paid by the City's Community Development Agency.

The typical building owner of a 4,200 square foot building would realize a cost benefit of approximately \$9,300 by taking advantage of the programs mentioned above. Other limited funding sources which may be available for seismic upgrading work depending on the type and use of your building are as follows:

1. Sonoma's Community Development Agency is currently exploring methods of providing additional financial assistance to owners through special districts, loan subsidies and public/private partnerships.
2. Small Business Administration (SBA) funding may be available for engineering, planning, permits, and construction costs to business borrowers that meet the agency's size standard and eligibility standards.
3. State Housing and Community Development Department administers a number of state programs aimed at encouraging renovation of housing resources for certain groups by providing loans at favorable terms.
4. Tax credits for rehabilitation may be available under the 1986 Tax Act.

April 14, 1992

Q. What does seismic upgrading work entail?

A. In basic terms, seismic upgrading involves the following items:

1. Providing a rigid floor and roof system which will act as a complete structural unit (diaphragm) when a load is applied. This is usually accomplished by attaching plywood to the floors and roof.
2. Providing wall stability so that the walls do not collapse inward or outward. This is sometimes accomplished by providing cross walls or wall bracing.
3. Providing adequate anchors between the floor and/or roof system and the walls.
4. Providing lateral stability for walls to prevent racking (in-plane shear) of the building.
5. Provide parapet bracing if necessary to prevent the collapse or partial collapse of parapet walls.
6. Secure veneers, ornamentation and appendages so as not to detach from supporting members.
7. Comply with fire resistive construction, fire sprinkler and exiting requirements to afford safe passage for the buildings occupants.
8. Provide disabled access throughout the ground floor of the building.
9. Correct all dangerous conditions within the building.

Q. I have received a "notice to correct deficiencies", where do I go from here?

- A. Step #1 Review all documents, especially the "notice to correct deficiencies", included in your package of information provided by the city. Make sure the information appears to be correct.
- Step #2 Notify any tenants of the building that the building is potentially hazardous in the event of an earthquake as required by the ordinance.
- Step #3 Contact a licensed architect or engineer to provide an analysis of the building to determine the extent of deficiencies in accordance with the upgrading ordinance and to provide you with some approximate cost evaluations. Be sure they review disabled access and fire sprinkler requirements along with their structural evaluation.
- Step #4 Review all avenues of potential financing and funding assistance. Check your lease agreements to determine if there are any apparent problems relating to your legal rights to upgrade the building. Create a preliminary schedule for performing and completing work in accordance with upgrading deadline provided.
- Step #5 Contact a general contractor to provide refined cost estimates and perform work.
- Step #6 Complete all required upgrading work.

CITY OF SONOMA Seismic Upgrading Schedule

